



PATENT ABSTRACTS OF JAPAN

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B23K 31/00(21) Application number: 57017975
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(72) Inventor: OKUNO KENICHI(54) ASSEMBLING AND WORKING METHOD OF
TURBINE BLADE

(57) Abstract:

PURPOSE: To assemble and work a turbine blade surely and quickly, by irradiating laser light to the working faces in the cover parts of assembled snubber vane pieces in parallel with the working faces thereby hardening said faces and making the clearances of all the working faces zero with residual strains.

CONSTITUTION: Cover parts 2 are provided in one body to the end parts 1a of respective snubber vane pieces 1. Working faces 4a, 4b are formed obliquely to both side edge parts 3a, 3b in the parts 2. When the parts 2 are joined in such a way that the pieces 1 form an annular shape, about 0.03W0.1mm clearances ΔC are allowed to remain between the faces 4a and 4b in the cover parts. Laser light from a laser oscillator 5 is irradiated through a condenser lens 6 to the faces 4a, 4b in parallel with the faces 4a, 4b, to apply heat treatment by hardening. Abrasion resistant hardened layers are thus formed on the faces 4a, 4b; at the

same time, the faces 4a, 4b are so finished that the clearances ΔC are made zero by residual strains.

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